

IN THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1.-16. (Cancelled).

17. (Original) A semiconductor element, comprising:

a first base layer of a first conductivity type;

a second base layer of a second conductivity type formed selectively in one surface region of said first base layer;

an emitter layer or a source layer of the first conductivity type formed selectively in a surface region of said second base layer;

a gate electrode formed on that portion of said second base layer which is positioned between said emitter layer or source layer and said first base layer with a gate insulating film interposed between said gate electrode and said second base layer;

a collector layer or a drain layer formed on the other surface region of said first base layer or formed selectively on one surface region of the first base layer;

a first main electrode formed on said collector layer or on said drain layer;

a second main electrode formed on said emitter layer or source layer and on said second base layer; and

a channel region formed in contact with said gate insulating film to permit the carrier to migrate between said emitter layer or source layer and said first base layer, said channel region having an impurity concentration profile such that the impurity concentration is substantially constant along said gate insulating film and in the direction in which the emitter layer or source layer, the second base layer, and the first base layer are formed in the order mentioned.

18. (Original) The semiconductor element according to claim 17, wherein said gate electrode is buried in a trench with a gate insulating film interposed between said gate electrode and said trench, said trench being formed to extend from the surface of said emitter layer or source layer to reach an intermediate portion of said first base layer through said second base layer.

19. (Original) The semiconductor element according to claim 17, wherein said gate electrode is formed on said gate insulating film formed on the surface of said second base layer.

20.-32. (Cancelled).